

LEADING INNOVATION: THE SYNERGY BETWEEN EMPOWERING LEADERSHIP AND INNOVATIVE ORGANIZATION CULTURE IN PHARMACEUTICAL SECTOR

Dr. Samina Qasim^{*1}, Mahira Anwer², Zoha Khalid³

^{*1}Senior Assistant Professor Bahria University

DOI: <https://doi.org/10.5281/zenodo.17104188>

Keywords

Empowering leadership, innovative organizational culture, innovative work behavior, perceived organizational culture, social exchange theory

Article History

Received: 18 June 2025

Accepted: 29 August 2025

Published: 12 September 2025

Copyright @Author

Corresponding Author: *
Dr. Samina Qasim

Abstract

Purpose: This study investigates how empowering leadership and innovative organizational culture influence employees innovative work behavior in pharmaceutical companies in Karachi and examines the mediating role of perceived organizational support. Design/methodology/approach: A quantitative approach was applied using purposive sampling. Data were collected from 200 employees through a structured questionnaire and analyzed using SMART PLS 4. Findings: Both empowering leadership and innovative organizational culture significantly enhanced innovative work behavior, while perceived organizational support also had a direct positive effect. However, mediation analysis showed that perceived organizational support did not significantly mediate the relationship between leadership, culture and innovative work behavior. Practical implications: Managers should foster empowering leadership styles and create a culture that values creativity, risk-taking, and collaboration to strengthen innovation. While organizational support remains important, leadership and culture exert a more direct influence on innovation outcomes. Originality/value: This study extends innovation literature by jointly examining leadership and culture alongside perceived organizational support in a developing economy context. It offers practical insights for enhancing innovation capacity in knowledge-intensive and regulated industries such as pharmaceuticals.

INTRODUCTION

Innovative work behavior (IWB) is fundamental to the success, growth, and sustainability of organizations, particularly in knowledge-intensive industries such as the pharmaceutical sector (Ekmekcioglu & Öner, 2024). IWB describes the process of developing original concepts in work environments that boost operational performance while improving competitive advantages and resolving workplace challenges (Puspitasari et al., 2023). Organizations need to support employee innovation because it creates a competitive advantage in modern fast-paced business markets (Azeem et al., 2021). The pharmaceutical sector in Pakistan's

developing economy stands to benefit from IWB promotion because it generates transformative solutions throughout drug research and supply management and healthcare delivery systems.

Research into the elements which drive and maintain IWB in organizations becomes crucial because of mounting business requirements for innovation-based strategies (W. Li et al., 2022). The research evaluates the impact of empowering leadership (EL) and innovative organizational culture (IOC) on fostering IWB within pharmaceutical companies that operate in Karachi Pakistan. The research explores POS as a mediating factor which

enhances the link between EL and IOC and their impact on IWB in organizations. Research findings demonstrate that leadership together with organizational culture determines employee participation in innovative behavior (Feng et al., 2016; Wang et al., 2019).

Research by (C. K. Echebiri & Amundsen, 2021) shows that the leadership style EL enhances creativity and innovation among employees through delegation of authority and autonomy and risk-taking support. The combination of employee decision-making power with self-leadership opportunities in EL creates a setting that fosters innovative idea development and testing (Alhamami, 2024).

The innovation process receives added momentum through an IOC because this mechanism enables knowledge exchange and teamwork and creates a receptive environment for fresh ideas (Trivedi & Srivastava, 2023). The pharmaceutical industry with its regulatory structure and research and development activities and technological progress can benefit from an IOC to transfer knowledge and enable cross-functional team collaboration which results in transformative innovation (Mondal, 2024). The presence of these factors by themselves does not guarantee the advancement of IWB.

Workplace support perceptions among employees serve as a vital intermediary factor that links EL to IOC (Eisenberger et al., 2020). The organizational support created through POS makes employees feel valued, so they respond by engaging in proactive and innovative behaviors (Ashraf et al., 2022). The pharmaceutical industry of Pakistan requires additional research to understand the interconnected relationships between EL, IOC and POS as drivers of IWB.

The relationship between leadership and culture on innovation receives considerable study yet research about POS as a mediator remains scarce, especially within pharmaceutical sectors of developing nations. Research about this topic primarily examines Western economies because their corporate arrangements along with employee expectations contrast substantially from South Asian market dynamics (Eva et al., 2019; Newman et al., 2018). EL and IOC have been studied independently in most previous research but their combined effect on IWB through POS remains unexplored. To boost

employee innovation in Pakistani pharmaceutical companies it becomes essential to identify the approaches which navigate through regulatory barriers while managing market uncertainties and resource limitations. SDG 9, which focuses on industry innovation and infrastructure, emphasizes how organizations should develop creative technological cultures to advance their operations. The pharmaceutical sector develops innovative healthcare solutions that support SDG 3 which focuses on good health and well-being. The interaction between EL and IOC with POS to drive IWB provides business leaders and policymakers with concrete insights to develop a sustainable healthcare industry based on innovation.

The study presents multiple important contributions that enhance existing research. First, the research enhances knowledge about EL and IOC and their relationship with IWB through the introduction of POS as an intervening factor. The study presents a comprehensive explanation of how leadership and organizational culture work together to affect innovation in pharmaceutical firms through this model.

The second significance of this study is that the research contributes to existing literature by analyzing empowering leadership (EL) and innovative organizational culture (IOC) together with perceived organizational support (POS) and innovative work behavior (IWB) within pharmaceutical companies that operate in Karachi. Third, the study seeks to analyze how EL supports employee innovation despite the widespread hierarchical leadership practices in the area. This research shows pharmaceutical employees possess capabilities to improve IWB while an IOC functions to strengthen IWB. The research shows that EL together with IOC affects IWB through POS functioning as a mediator. The core objective of this research is to study EL and IOC effects on employee IWB at pharmaceutical organizations in Karachi while analyzing POS as a relationship mediator.

1. Literature review

Theories of leadership exist to decode and condense leadership complexities and effects (Dickson, 2023). The modern business environment requires leadership styles which promote employee

empowerment and engagement according to Jaiswal and Dhar (2017). Empowering leadership has become popular because it distributes power while supporting employee independence to foster innovation (Noureen, R. 2024). Empowering leadership differs from traditional models since it focuses on delegation and participation and employee support which enables workers to take charge of their tasks and demonstrate superior innovative behavior (Giang, 2019). The leadership behaviors identified by (Karagün, 2021) that include coaching and leading by example and participative decision-making methods boost employee motivation and self-efficacy. This, in turn, strengthens their perceived organizational support (POS) and commitment to the organization (Lee et al., 2018). The shared norms and values and beliefs of employees create organizational culture which determines their workplace behavior and perceptions (Akpa et al., 2021). IOC describes how well an organization promotes innovation through support for employee innovation (Ekmekcioglu & Öner, 2024). Organizations with cultures which support risk-taking along with creativity and experimental approaches make employees view the organization as dynamic and future-oriented (Wei et al., 2013). Organizations that employees perceive as innovative receive better innovative work behavior from their staff members while also receiving more novel ideas (Tian et al., 2018). Studies show that organizational climate strength enhances employee initiative and creative thinking which produces better organizational results and market superiority (X. Li & Warewanich, 2024).

Employees determine their perception of organizational value for their work and well-being through POS (Eisenberger et al., 2020). Social Exchange Theory (Blau, 1964) serves as the foundation for POS which demonstrates that employee support from organizations leads to higher work dedication and effort (Nnedum et al., 2017). High levels of POS result in better job satisfaction as well as stronger organizational commitment and improved innovative behavior according to Wen et al. (2019). The leadership style shapes POS directly because supportive methods create feelings of organizational connection which stimulates employee idea sharing (Qasim et al., 2022).

Organizations that create innovative cultures provide increased employee support which drives workers to participate actively in creative problem-solving and innovative projects (Nazir et al., 2019). The implementation of IWB requires organizations to develop innovative ideas which they promote and execute for better results (AlEssa & Durugbo, 2022). Research shows POS acts as a mediator which strengthens the connection between leadership and IWB since employees who experience high levels of value feel more comfortable taking risks and suggesting solutions according to (Park & Kim, 2022). The work environment created by empowering leadership directly promotes IWB because it allows employees to be autonomous and creative (Nguyen et al., 2023). IOC stands as an essential factor which motivates employees to integrate innovation with their daily work duties according to (Sangpern et al. 2021). Organizations seeking to enhance IWB should prioritize implementing empowering leadership combined with innovative culture development and establishing clear organizational support perception among employees.

2.1 Hypothesis development

EL and IWB

Modern business success depends heavily on innovation according to (Udagedara & Allman, 2019). Organizations need to establish conditions which help their employees perform innovative work behaviors through leadership styles that promote autonomy and idea generation (Miller et al., 2020). Empowering leadership enables employee innovation through its ability to boost employee confidence about their ability to submit innovative solutions (Joo et al., 2023).

Leaders who exhibit empowering behaviors create employee independence while inviting workers to share decisions and build their self-assurance (C. Echebiri et al., 2020). The leadership approach enables employees to obtain psychological empowerment which enables them to accomplish innovation-related duties (Bhatnagar et al., 2020). Leadership that connects work assignments to employee self-concepts through empowerment enables cognitive engagement which improves their capacity to discover issues while creating innovative

solutions (Han, Y. 2022) Empowering leadership depends on psychological empowerment which leads to increased employee initiative toward process experimentation (Giang, 2019).

Organizational IWB operates through three sequential stages including idea generation followed by idea promotion and ending with idea realization according to (Grobben, E. 2022). Workers under empowering leadership tend to start innovative problem-solving initiatives while actively supporting their concepts which leads to practical execution (Noureen, R. 2024). Empowering leadership approaches which grant employees decision-making powers produce greater IWB according to research findings (Khan et al., 2020).

According to Social Exchange Theory (Blau, 1964), the linkage between empowering leadership and IWB shows alignment. Staff members view empowering leadership as an essential organizational resource which leads them to perform innovative behaviors that help the organization (Wang et al., 2023).

With regard to SET and the above theoretical background, we formulate the following hypothesis,

H1. Empowering leadership has a significant impact on employees' innovative work behavior.

IOC and IWB

A shared collection of values along with beliefs and behaviors defines organizational culture as it guides employee conduct throughout the organization (Ouchi & Wilkins, 1985). The innovative organizational culture promotes IWB because it encourages employees to accept changes while taking risks and focusing on new creative ideas (Nguyen et al., 2023). Organizations achieve employee innovation engagement through their core value emphasis on innovation and their supportive experimental environment (Hartmann, 2023).

Research has investigated how innovation culture affects employee creativity and problem-solving through their IWB since organizational culture drives employee behavior (Ekmekcioglu & Öner, 2024; Harel et al., 2021). Organizations with a culture that promotes autonomy and knowledge-sharing and continuous learning capabilities enable employees to develop and implement new ideas

(Curado et al., 2023). Organizations achieve high innovation performance through their flexible structures and reward systems that acknowledge innovative work and their tolerance toward failures which together create an environment where employees feel free to take risks with experimental solutions (Liu, Y. 2018).

Social Exchange Theory (Blau, 1964) explains how employees show gratitude through innovative behaviors after their organization supports them (Musenze & Mayende, 2023).

This literature review led to the following hypothesis.

H2. Innovative organizational culture has a significant impact on employees' innovative work behavior.

POS and IWB

The perception employees hold about their organization's support represents Perceived Organizational Support (POS) as defined by Eisenberger et al. (1986). Organizations build employee appreciation through necessary resource provision and recognition and encouragement that strengthens both confidence and responsibility (Amin et al., 2024). Organizational identification strengthens through POS which leads employees to perform organizational benefit actions including innovation (Rhoades & Eisenberger, 2020).

Employees need to take risks and confront standard practices to complete the innovation process which consists of three stages: idea generation promotion and realization (Grobben, E. 2022). Organizational support that employees perceive as strongly enables them to continue with innovative efforts despite facing resistance (Rai & Agarwal, 2018). The job resources offered by POS enhance intrinsic motivation which allows employees to perform beyond their standard duties and generate innovative solutions (ALDABBAS, H. 2021). Multiple studies have proven that positive relationships exist between POS and employees' innovative work behavior (Park, J., & Kim, W. 2022).

Social Exchange Theory (Blau, 1964) explains this connection through employee responses to organizational support by performing innovative work-based activities that drive organizational success.

This literature review led to the following hypothesis.

H3. Perceived organizational support has a significant impact on employees' innovative work behavior.

Mediating role of POS between EL and IWB

Employees develop stronger belief in their ability to meet their work objectives when they experience perceived organizational support according to (Ekmekcioglu & Öner, 2024). The way employees see their organization value their work and welfare as part of POS leads to greater work engagement and organizational commitment (Kirkland, J. E. 2017). Employees who recognize high levels of organizational support tend to show extra-role behaviors particularly innovative work behavior (IWB) because they feel a responsibility to repay their organization through better performance (Musenze & Mayende, 2023). When employees detect insufficient organizational support, they become less inclined to extend themselves outside of their official duties (Eisenberger et al., 1997).

The leadership style of empowerment creates an encouraging workplace by granting independence to staff members while acknowledging their accomplishments and enabling them to access required innovation tools (Gaudet & Tremblay, 2017). Workers under empowering leadership develop positive views about their organization which boosts their innovative behavior drive (Chung, 2017; Rhoades & Eisenberger, 2002). Leaders serve as vital determinants for POS because employees view their actions as indicators of organizational attitudes toward workforce members (Gojny & Struzyna, 2013). Leaders who put employee

development together with ethical conduct and workplace wellness build a strong perception of organizational support among their workforce (Musenze & Mayende, 2023).

The position of POS as a mediator between empowering leadership and IWB follows Social Exchange Theory (Blau, 1964) because employees show enhanced innovative work behavior after returning organizational support (Musenze & Mayende, 2023).

The following hypothesis is developed with this theoretical context.

H4. Perceived organizational support mediates the relationship between empowering leadership and employees' innovative work behavior.

Mediating role of POS Between IOC and IWB

The innovative organizational culture (IOC) creates a workspace which motivates workers to share creative thoughts and experiment with new approaches and innovative concepts (Nazir et al., 2019). Employees develop a stronger belief in organizational appreciation when organizations show innovation value because they sense greater organizational support (Ekmekcioglu & Öner, 2024). Organizational support perceptions by employees become stronger when a risk-embracing culture allows for mistake tolerance (Xu et al., 2025).

In accordance with Social Exchange Theory (Blau, 1964) POS functions as a mediator between IOC and IWB because employees reward organizational support through enhanced innovation engagement.

We formulate the following hypothesis based on our approach and the theoretical framework.

H5. Perceived organizational support mediates the relationship between innovative organizational culture and employees' innovative work behavior.

Figure 1 depicts the proposed theoretical model of this study.

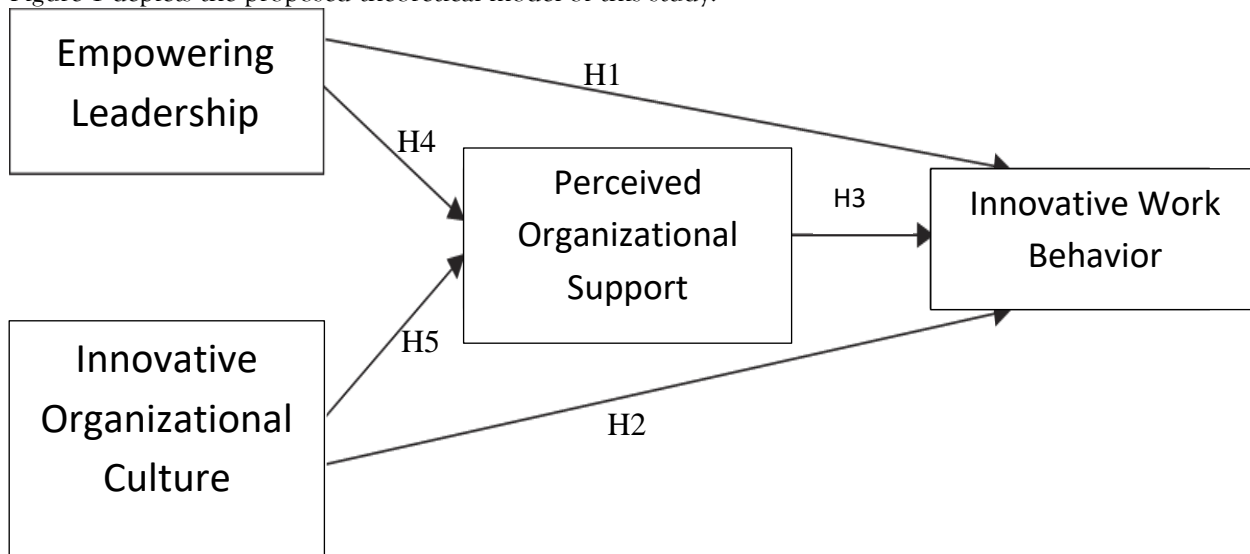


Figure 1. Proposed theoretical model

Source(s): Figure by authors

2. Methodology

Sample and Procedures

Data was collected from employees working in pharmaceutical companies located in Karachi. The pharmaceutical industry stands as a vital economic sector in Pakistan since it advances innovation while driving development (Bontis et al., 2020). Employees who participate in research activities and product development and manufacturing functions suit the study of innovative work behavior (IWB) (De Jong & Den Hartog, 2008).

First and foremost, we identified various pharmaceutical companies operating in Karachi and reached out to employees through official email communication. The online survey questionnaire was shared via Google Forms, while physical copies were also distributed for wider reach by adopting a purposive sampling technique. The data collection period spanned three months, during which employees were asked to complete an online or paper-based questionnaire. The survey introduction provided information about the study’s objectives and assured participants of their anonymity and confidentiality. Participation was voluntary, and respondents were informed that the data would only be used for academic research.

A total of 200 questionnaires were distributed, and responses were collected for analysis. Demographic

details of the sample showed that 61% (n = 122) of respondents were female, while 39% (n = 78) were male. The age ranged from 21 to above 50 years, with the majority (72.5%) falling within the 21-30 age range. Additionally, 64.5% of respondents had a bachelor’s degree, and 35.5% held a master’s degree. Participants’ mean organizational tenure was approximately 7 to 18 months, with tenure ranging from less than six months to over five years.

Measures

All measures used in this study were originally developed in English and have been validated in prior research. The study employed a survey-based methodology, utilizing a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) for all variables, except for the dependent variable, which was measured on a scale from 1 = never to 5 = always.

Empowering Leadership (EL). The independent variable, empowering leadership, was measured using a 12-item scale developed by Ahearne et al. (2005). A sample item includes: “My leader encourages me to develop my skills.” Cronbach’s α coefficient for this scale was 0.912.

Innovative Organizational Culture (IOC). The second independent variable, innovative

organizational culture, was assessed using Wallach’s (1983) 8-item scale. A sample item includes: “Innovation is a core value of my organization.” Cronbach’s α coefficient for this scale was 0.816.

Perceived Organizational Support (POS). The mediating variable, perceived organizational support, was assessed using Eisenberger et al.’s (1997) 8-item scale. A sample item includes: “My organization values my contributions to its success.” Cronbach’s α coefficient for this scale was 0.828.

Innovative Work Behavior (IWB). The dependent variable, innovative work behavior, was measured using a 10-item scale by De Jong & Den Hartog (2010). A sample item includes: “I generate creative ideas at work.” Responses were recorded on a five-point frequency scale ranging from 1 (never) to 5 (always). Cronbach’s α coefficient for this scale was 0.764.

In addition to the main study variables, demographic information was collected, including age, gender, educational level, and organizational tenure, following the approach of Ekmekcioglu & Öner (2024).

3. Results

Measurement Model

In the PLS-SEM approach, it is essential to validate the outer measurement model before analyzing the inner model. Thus, our research model’s content, convergent and discriminant validity are analyzed for validation of the outer model.

Convergent validity

Convergent validity was assessed by examining factor loadings, composite reliability (CR), and average variance extracted (AVE). All factor loadings were significant ($p < 0.001$) and exceeded 0.70. The CR values for all constructs were greater than 0.70, and the AVE values exceeded 0.50, confirming adequate convergent validity. Table 1 confirms strong convergent validity, with AVE values surpassing 0.5. Furthermore, CR values above 0.6 validate reliability of all constructs used in the research model, meeting the standards for internal composite reliability. Figure 2 illustrates the measurement model between the EL, IOC, and IWB which further depicts the mediation activity of POS between EL and IWB and IOC and IWB.

Table 1. Convergent Validity and Reliability

| Constructs | Items | Loading | P-values | Composite reliability (rho_a) | Composite reliability (rho_C) | Average Variance Extracted (AVE) |
|-----------------------------------|-------|---------|----------|-------------------------------|-------------------------------|----------------------------------|
| Empowering Leadership | EL1 | 0.697 | | 0.920 | 0.928 | 0.589 |
| | EL10 | 0.824 | 0.000 | | | |
| | EL11 | 0.857 | 0.000 | | | |
| | EL12 | 0.882 | 0.000 | | | |
| | EL3 | 0.786 | 0.000 | | | |
| | EL4 | 0.782 | 0.000 | | | |
| | EL5 | 0.792 | 0.000 | | | |
| Innovative Organizational Culture | IOC3 | 0.786 | 0.000 | 0.830 | 0.869 | 0.571 |
| | IOC5 | 0.713 | 0.000 | | | |
| | IOC6 | 0.807 | 0.000 | | | |
| | IOC7 | 0.733 | 0.000 | | | |
| | IOC8 | 0.736 | 0.000 | | | |
| Innovative Work Behavior | IWB5 | 0.751 | 0.000 | 0.811 | 0.864 | 0.682 |
| | IWB7 | 0.900 | 0.000 | | | |
| | IWB8 | 0.766 | 0.000 | | | |

| | | | | | | |
|----------------|------|-------|-------|-------|-------|-------|
| | IWB9 | 0.723 | 0.000 | | | |
| Perceived | POS1 | 0.763 | 0.000 | 0.852 | 0.879 | 0.598 |
| Organizational | POS2 | 0.570 | 0.000 | | | |
| Support | POS3 | 0.790 | 0.000 | | | |
| | POS4 | 0.825 | 0.000 | | | |
| | POS8 | 0.879 | 0.000 | | | |

Source(s): Table by authors

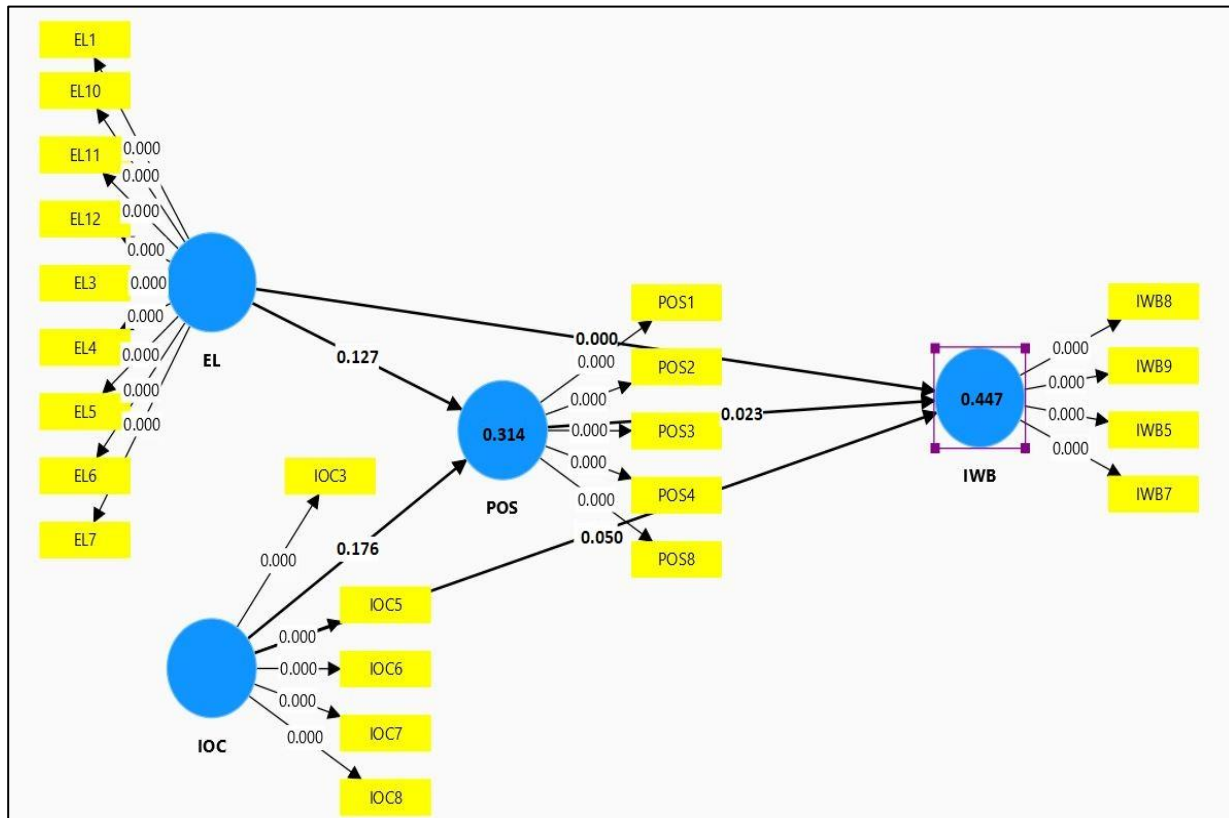


Figure 2. Measurement Model

Source(s): Figure by authors

Discriminant validity

The validity in this research study is evaluated using the Fornell-Larcker method to calculate and analyze discriminant validity. Discriminant validity determines whether constructs which are expected to be unrelated are certainly distinct. This method utilizes the AVE values by relating the square root of each construct’s AVE with its connections with other

constructs to ensure it is higher (Fornell & Larcker, 1981). The square root of AVE for each construct was higher than its correlation with other constructs, establishing discriminant validity (Fornell & Larcker, 1981). The values presented in table 2 verify that discriminant validity of this research model is highly significant. These results establish the measurement model’s reliability and validity.

Table 2. Discriminant Validity by Fornell-Larcker Method

| | EL | IOC | IWB | POS |
|-----|-------|-------|-------|-------|
| EL | 0.768 | | | |
| IOC | 0.319 | 0.756 | | |
| IWB | 0.585 | 0.104 | 0.826 | |
| POS | 0.523 | 0.325 | 0.424 | 0.773 |

Note(s): EL= Servant Leadership, IOC= Innovative Organizational Culture, POS= Perceived Organizational Support; IWB = Innovative Work Behavior
 Source(s): Table by authors

Structural model and Hypotheses Testing

Following validation of the measurement model, the hypotheses were tested using the PLS-SEM technique. Table 3 presents the hypothesis testing results.

The findings indicate that empowering leadership ($\beta = 0.503, p < 0.001$), innovative organizational culture ($\beta = 0.252, p = 0.050$), and perceived organizational support ($\beta = 0.274, p = 0.023$) significantly influence innovative work behavior, confirming hypotheses H1, H2, and H3. However, the mediation analysis reveals that perceived organizational support does not mediate the relationship between empowering leadership and innovative work behavior ($\beta = -0.079, p = 0.127$) or innovative organizational culture and innovative work behavior ($\beta = -0.034, p = 0.176$), leading to the rejection of hypotheses H4 and H5. Figure 3 shows the structural equation model between empowering leadership (EL), innovative work behavior (IWB) and innovative organizational culture (IOC), innovative work behavior (IWB) with the mediation analysis of perceived organizational support (POS) between EL & IWB and IOC & IWB.

Table 3. Hypotheses Testing

| | Hypotheses | Estimates | SD | T-Values | P-Values | Decision |
|----|-------------------|-----------|-------|----------|----------|----------|
| H1 | EL -> IWB | 0.503 | 0.114 | 4.407 | 0.000 | Accepts |
| H2 | IOC -> IWB | 0.252 | 0.129 | 1.961 | 0.050 | Accepts |
| H3 | POS -> IWB | 0.274 | 0.120 | 2.279 | 0.023 | Accepts |
| H4 | EL -> POS -> IWB | -0.079 | 0.052 | 1.525 | 0.127 | Rejects |
| H5 | IOC -> POS -> IWB | -0.034 | 0.025 | 1.355 | 0.176 | Rejects |

Note(s): EL= Servant Leadership, IOC= Innovative Organizational Culture, POS= Perceived Organizational Support; IWB = Innovative Work Behavior

Source(s): Table by authors

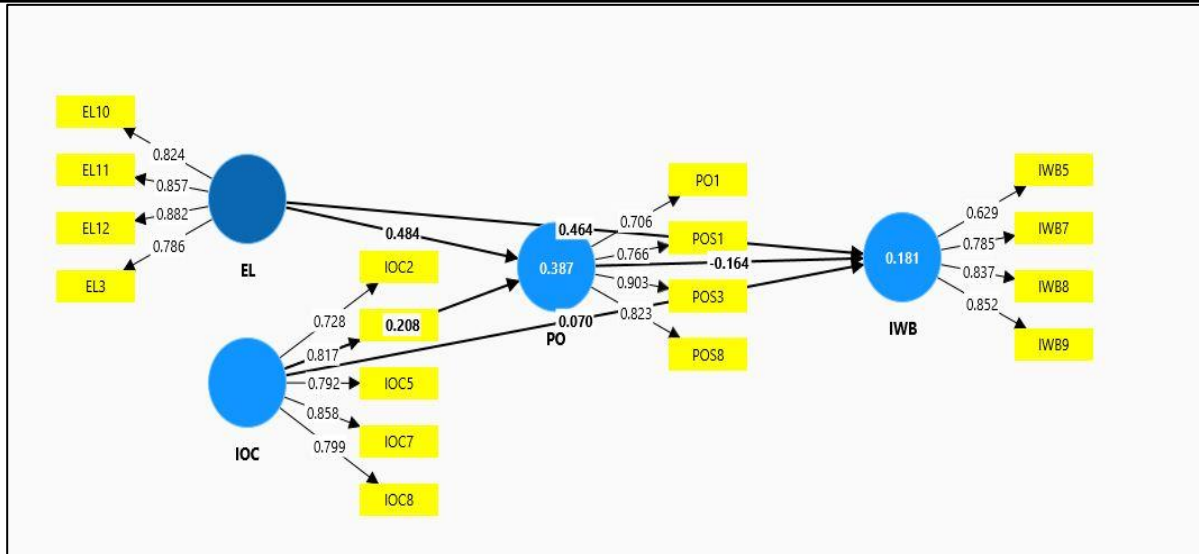


Figure 3. Structural Equation Model

Source(s): Figure by authors

5. Conclusion

5.1 Discussion

Innovation plays a crucial role in sustaining competitive advantage, particularly in dynamic industries like pharmaceuticals (De Jong & Den Hartog, 2008). Organizations must foster an environment that encourages employees to engage in innovative work behaviors (IWB), which include idea generation, idea promotion, and idea implementation. This study examined the impact of empowering leadership (EL) and innovative organizational culture (IOC) on IWB while also exploring the mediating role of perceived organizational support (POS).

The findings indicate that both EL and IOC significantly contribute to fostering IWB. This aligns with previous research that emphasizes the importance of leadership in empowering employees to think creatively and take initiative (Ahearne et al., 2005). An empowering leader encourages employees to develop skills, take ownership of their tasks, and contribute new ideas, leading to increased innovation (Bontis et al., 2020). Additionally, an innovative organizational culture fosters an environment where creativity is valued, which motivates employees to engage in innovation-related activities (Wallach, 1983).

However, contrary to expectations, POS did not mediate the relationship between EL and IWB or

IOC and IWB. While organizational support is generally associated with higher levels of innovation (Eisenberger et al., 1997), its non-significant mediation suggests that leadership and culture might have a more direct impact on IWB. This may be due to employees perceiving innovation as an intrinsic job requirement rather than something contingent on organizational support. Previous studies have found mixed results regarding the mediating role of POS, suggesting that other factors, such as job autonomy and psychological empowerment, may play a stronger role in influencing IWB (Ekmekcioglu & Öner, 2024).

These findings contribute to the understanding of how leadership and organizational culture shape employees' innovative behaviors. Organizations must recognize that leadership and culture alone can significantly drive IWB, but additional factors may be needed to enhance the perceived support's role in innovation.

5.2 Theoretical Implications

This study adds to the existing body of knowledge on innovation management by highlighting the direct impact of EL and IOC on IWB while challenging the mediating role of POS. Unlike prior research that suggested POS as a key driver of employee innovation (Eisenberger et al., 1997), our findings

suggest that leadership and culture may have a more immediate and dominant influence.

Furthermore, the study reinforces the applicability of leadership and organizational culture theories in understanding workplace innovation. The findings support Ahearne et al.'s (2005) model of empowering leadership, which emphasizes skill development and autonomy as critical for fostering innovation. Additionally, Wallach's (1983) concept of an innovative organizational culture is validated in this study, emphasizing that a workplace environment that values creativity encourages employees to take initiative in generating and implementing ideas.

These insights offer a refined perspective for researchers studying innovation management, particularly in developing economies like Pakistan, where organizational structures and cultural contexts may differ from Western settings. Future research should further investigate the interplay between leadership, culture, and other psychological variables influencing IWB.

5.3 Managerial Implications

For managers in the pharmaceutical sector and other knowledge-intensive industries, this study underscores the importance of fostering an empowering leadership style and cultivating an innovative organizational culture. Leaders should focus on encouraging employees to take ownership of their work, develop their skills, and engage in creative problem-solving. Providing autonomy and recognizing employees' contributions can significantly enhance IWB.

Organizations should also work toward embedding innovation into their culture by reinforcing values that encourage experimentation and creativity. Policies and practices should support employees in taking calculated risks and proposing new ideas. Training programs, mentorship initiatives, and innovation-focused incentives can help sustain a culture where IWB thrives.

Although POS did not emerge as a significant mediator, organizations should not disregard the role of support systems. Providing employees with adequate resources, recognition, and growth opportunities can still enhance overall job satisfaction and motivation. Managers should ensure

that employees feel valued, even if their innovation-related behaviors are primarily driven by leadership and cultural influences.

5.4 Limitations and Future Research

This study has certain limitations that should be considered when interpreting the findings. First, the study was conducted in the pharmaceutical sector in Karachi, Pakistan, limiting its generalizability to other industries or regions. Future research should examine different industries and geographic locations to gain a broader understanding of the factors influencing IWB.

Second, this study employed a cross-sectional research design, capturing data at a single point in time. A longitudinal study could provide deeper insights into how leadership, culture, and organizational support influence IWB over time. Additionally, the reliance on self-reported data may introduce common method bias, even though statistical tests were performed to minimize this risk. Future studies should also explore other potential mediators or moderators, such as job autonomy, employee motivation, or organizational learning culture, which may further explain the relationship between leadership, culture, and IWB. Investigating these variables can provide a more comprehensive understanding of the mechanisms driving innovation in the workplace.

Despite these limitations, this study contributes valuable insights into the role of leadership and culture in fostering IWB. By refining innovation management strategies, organizations can create environments that empower employees and sustain long-term innovation.

References

- Akpa, V. O., Asikhia, O. U., & Nneji, N. E. (2021). Organizational Culture and Organizational Performance: A Review of Literature. *International Journal of Advances in Engineering and Management*, 3(1), 361-372. <https://doi.org/10.35629/5252-0301361372>

- AlEssa, H. S., & Durugbo, C. M. (2022). Systematic review of innovative work behavior concepts and contributions. In *Management Review Quarterly* (Vol. 72, Issue 4). Springer International Publishing. <https://doi.org/10.1007/s11301-021-00224-x>
- Alhamami, M. A. (2024). *Leading for Innovation : How Different Leadership Styles Shape Employee Innovation in Saudi Higher Education*. March, 1-271.
- Amin, M., Chan, K. W., Shamim, A., Ghazali, Z. Bin, & Lai, F. W. (2024). Engaging employees in value cocreation: interplay among firm, employee, and supervisor. *Service Industries Journal*, 44(7-8), 592-619. <https://doi.org/10.1080/02642069.2022.2056164>
- Ashraf, R., Usman, R., & Azhar, T. (2022). Impact of Perceive CSR, Transformational Leadership and Perceived Organizational Support on Organizational Identification and Pro environmental Behavior of Employees in Pharmaceutical Industry of Pakistan. *Journal of Policy Research*, 8(4), 227-236. <https://doi.org/10.5281/zenodo.7594860>
- Azeem, M., Ahmed, M., Haider, S., & Sajjad, M. (2021). Technology in Society Expanding competitive advantage through organizational culture , knowledge sharing and organizational innovation. *Technology in Society*, 66(June), 101635. <https://doi.org/10.1016/j.techsoc.2021.101635>
- Bhatnagar, V. R., Jain, A. K., Tripathi, S. S., & Giga, S. (2020). Beyond the competency frameworks- conceptualizing and deploying employee strengths at work. *Journal of Asia Business Studies*, 14(5), 691-709. <https://doi.org/10.1108/JABS-07-2019-0228>
- Bontis, N., Yaacob, M. R., Khalique, M., & Ramayah, T. (2020). *Impact of Intellectual Capital on Innovation in Pharmaceutical Manufacturing SMEs in Pakistan Impact of intellectual capital on innovation in pharmaceutical manufacturing SMEs in Pakistan Ieeqan A . Qurashi Muhammad Khalique * Nick Bontis Mohd Rafi Yaacob*. July. <https://doi.org/10.1504/IJLIC.2020.10023755>
- Curado, C., Henriques, P., Oliveira, M., & Martins, R. (2023). Organisational culture as an antecedent of knowledge sharing in NGOs. *Knowledge Management Research and Practice*, 21(3), 449-461. <https://doi.org/10.1080/14778238.2021.1908864>
- Dickson, R. K. (2023). Analysis of The Traditional Leadership Theories: A Review of Contemporary Leadership Approaches and Management Effectiveness. *Information and Knowledge Management*, November, 8-21. <https://doi.org/10.7176/ikm/13-5-02>
- Echebiri, C., Amundsen, S., & Engen, M. (2020). Linking structural empowerment to employee-driven innovation: The mediating role of psychological empowerment. *Administrative Sciences*, 10(3). <https://doi.org/10.3390/admsci10030042>
- Echebiri, C. K., & Amundsen, S. (2021). The relationship between leadership styles and employee-driven innovation: the mediating role of leader-member exchange. *Evidence-Based HRM*, 9(1), 63-77. <https://doi.org/10.1108/EBHRM-10-2019-0091>
- Eisenberger, R., Shanock, L. R., & Wen, X. (2020). *Perceived Organizational Support : Why Caring About Employees Counts*. 101-124.
- Ekmekcioglu, E. B., & Öner, K. (2024). Servant leadership, innovative work behavior and innovative organizational culture: the mediating role of perceived organizational support. *European Journal of Management and Business Economics*, 33(3), 272-288. <https://doi.org/10.1108/EJMBE-08-2022-0251>
- Giang, H. T. (2019). *Leading Innovation in Small and Medium-Sized Enterprises : Understanding the Role of Empowering Leadership and Organisational Climate*. January, 1-169.
- Karagün, E. (2021). The Metaphors of Teachers Employed at Primary and Secondary Schools about the Concepts: "Physical Education" and "Sport". *Egitim ve Bilim*, 46(208), 79-104. <https://doi.org/10.15390/EB.2021.9230>

- Khan, M. A., Ismail, F. B., Hussain, A., & Alghazali, B. (2020). The Interplay of Leadership Styles, Innovative Work Behavior, Organizational Culture, and Organizational Citizenship Behavior. *SAGE Open*, 10(1). <https://doi.org/10.1177/2158244019898264>
- Li, W., Gill, S. A., Wang, Y., Safdar, M. A., Sheikh, M. R., & Wang, Y. (2022). *Proactive Personality and Innovative Work Behavior: Through the Juxtapose of Schumpeter 's Theory of Innovation and Broaden-And-Build Theory*. 13(June), 1-17. <https://doi.org/10.3389/fpsyg.2022.927458>
- Li, X., & Warewanich, T. (2024). the Impact of Psychological Safety on Employee Creativity: the Roles of Knowledge Sharing, Knowledge Hiding, and Organizational Safety Climate. *Journal of Modern Project Management*, 12(1), 180-195. <https://doi.org/10.19255/JMPM3414>
- Mondal, N. K. (2024). *COLLABORATION CONCERNING Master of Science Thesis*. August.
- Park, J., & Kim, W. (2022). The Impact of Perceived Organizational Support on Innovative Work Behavior Through Psychological Empowerment: Focusing on the Moderated Mediating Role of Organizational Procedural Justice. *Journal of Technical Education and Training*, 14(1), 178-191. <https://doi.org/10.30880/jtet.2022.14.01.015>
- Puspitasari, D., Ekowati, D., & Rizki, A. (2023). Heliyon Innovative work behavior in public organizations: A systematic literature review. *Heliyon*, 9(2), e13557. <https://doi.org/10.1016/j.heliyon.2023.e13557>
- Qasim, S., Usman, M., Ghani, U., & Khan, K. (2022). *Inclusive Leadership and Employees ' Helping Behaviors: Role of Psychological Factors*. 13(July), 1-9. <https://doi.org/10.3389/fpsyg.2022.888094>
- Trivedi, K., & Srivastava, K. B. L. (2023). *The impact of intellectual capital-enhancing HR practices and culture on innovativeness – mediating role of knowledge management processes*. <https://doi.org/10.1108/JOEPP-05-2023-0174>
- Udagedara, R. S., & Allman, K. (2019). Organizational Dynamics and Adoption of Innovations: A Study within the Context of Software Firms in Sri Lanka. *Journal of Small Business Management*, 57(2), 450-475. <https://doi.org/10.1111/jsbm.12378>
- Wang, H., Zhang, Y., Li, P., & Henry, S. E. (2023). You raise me up and I reciprocate: Linking empowering leadership to organizational citizenship behavior and unethical pro-organizational behavior. *Applied Psychology*, 72(2), 718-742. <https://doi.org/10.1111/apps.12398>
- Xu, X., Wen, N., & Cai, R. (2025). Laughing it off: How does leader humor alleviate employees' compassion fatigue in service failure? *Tourism Management*, 106(June 2024). <https://doi.org/10.1016/j.tourman.2024.104980>
- Feng, C., Huang, X. and Zhang, L. (2016), "A multilevel study of transformational leadership, dual organizational change and innovative behavior in groups", *Journal of Organizational Change Management*, Vol. 29 No. 6, pp. 855-877, doi: 10.1108/JOCM-01-2016-0005.
- Wang, Z., Meng, L. and Cai, S. (2019), "Servant leadership and innovative behavior: a moderated mediation", *Journal of Managerial Psychology*, Vol. 34 No. 8, pp. 505-518, doi: 10.1108/JMP-11-2018-0499.
- Amundsen, S. and Martinsen, Ø.L. (2014), "Self-other agreement in empowering leadership: relationships with leader effectiveness and subordinates' job satisfaction and turnover intention", *The Leadership Quarterly*, Vol. 25 No. 4, pp. 784-800.
- Eva, N., Robin, M., Sendjaya, S., van Dierendonck, D. and Liden, R.C. (2019), "Servant leadership: a systematic review and call for future research", *The Leadership Quarterly*, Vol. 30 No. 1, pp. 111-132, doi: 10.1016/j.leaqua.2018.07.004.

- Newman, A., Neesham, C., Manville, G. and Tse, H.H. (2018), "Examining the influence of servant and entrepreneurial leadership on the work outcomes of employees in social enterprises", *The International Journal of Human Resource Management*, Vol. 29 No. 20, pp. 2905-2926, doi: 10.1080/09585192.2017.1359792.
- Jaiswal, N.K. and Dhar, R.L. (2017), "The influence of servant leadership, trust in leader and thriving on employee creativity", *Leadership & Organization Development Journal*, Vol. 38 No. 1, pp. 2-21, doi: 10.1108/LODJ-02-2015-0017.
- Noureen, R. (2024). *The dark side of empowering leadership* (Doctoral dissertation, Universität Potsdam).
- Hughes, D.J., Lee, A., Tian, A.W., Newman, A. and Legood, A. (2018), "Leadership, creativity, and innovation: a critical review and practical recommendations", *The Leadership Quarterly*, Vol. 29 No. 5, pp. 549-569, doi: 10.1016/j.leaqua.2018.03.001.
- Wei, Y., O'Neill, H., Lee, R.P. and Zhou, N. (2013), "The impact of innovative culture on individual employees: the moderating role of market information sharing", *Journal of Product Innovation Management*, Vol. 30 No. 5, pp. 1027-1041, doi: 10.1111/j.1540-5885.2012.01000.x.
- Nnedum, O. A. U., Ezechukwu, E. N., Chine, B. C., Abah, N. C., Chukwura, D. J., Okeke, T., & Emma-Echiegu, B. N. (2017). Exploratory Analysis of Impact of Organizational Support, and Social Capital on Organizational Citizenship Behaviour. *African Psychologist: An International Journal of Psychology and Allied Professions*, 7(1).
- Blau, P.M. (1964), *Social Exchange Theory*, John Wiley & Sons, New York, NY.
- Wen, J., Huang, S. and Hou, P. (2019), "Emotional intelligence, emotional labor, perceived organizational support, and job satisfaction: a moderated mediation model", *International Journal of Hospitality Management*, Vol. 81, pp. 120-130, doi: 10.1016/j.ijhm.2019.01.009.
- Nazir, S., Shafi, A., Atif, M.M., Qun, W. and Abdullah, S.M. (2019), "How organization justice and perceived organizational support facilitate employees' innovative behavior at work", *Employee Relations: The International Journal*, Vol. 41 No. 6, pp. 1288-1311, doi: 10.1108/ER-01-2017-0007
- Nguyen, H. T. N., Nguyen, H. T. T., Truong, A. T. L., Nguyen, T. T. P., & Nguyen, A. V. (2023). Entrepreneurial culture and innovative work behaviour: the mediating effect of psychological empowerment. *Journal of Entrepreneurship in Emerging Economies*, 15(2), 254-277.
- Sangperm, N. (2021). *Causal Model of Transformational Leadership, Organizational Learning, Absorptive Capacity, and Organizational Innovation of the Food Manufacturing Industry in Thailand* (Doctoral dissertation, RAJAMANGALA UNIVERSITY OF TECHNOLOGY THANYABURI. FACULTY OF BUSINESS ADMINISTRATION).
- Miller, L., & Miller, A. F. (2020). Innovative work behavior through high-quality leadership. *International Journal of Innovation Science*, 12(2), 219-236.
- Joo, B. K., Yim, J. H., Jin, Y. S., & Han, S. J. (2023). Empowering leadership and employee creativity: the mediating roles of work engagement and knowledge sharing. *European journal of training and development*, 47(9), 881-899.
- Han, Y. (2022). *Understanding the mechanisms underlying the relationship between empowering leadership and team creativity in customer contact services* (Doctoral dissertation, University of Essex).
- Grobber, E. (2022). *Effective line manager behaviours that stimulate innovative work behaviour of employees in the three different phases of IWB: idea generation, idea promotion and idea realization at knowledge intensive service-oriented organizations* (Master's thesis, University of Twente).
- Noureen, R. (2024). *The dark side of empowering leadership* (Doctoral dissertation, Universität Potsdam).

- Nguyen, H. T. N., Nguyen, H. T. T., Truong, A. T. L., Nguyen, T. T. P., & Nguyen, A. V. (2023). Entrepreneurial culture and innovative work behaviour: the mediating effect of psychological empowerment. *Journal of Entrepreneurship in Emerging Economies*, 15(2), 254-277.
- Hartmann, M. R. K., & Hartmann, R. K. (2023). Hiding practices in employee-user innovation. *Research Policy*, 52(4), 104728.
- Harel, R., Schwartz, D. and Kaufmann, D. (2021), "Organizational culture processes for promoting innovation in small businesses", *EuroMed Journal of Business*, Vol. 16 No. 2, pp. 218-240, doi: 10.1108/EMJB-03-2020-0027.
- Liu, Y. (2018). *Organizational culture, employee resilience and performance in the international banking industry* (Doctoral dissertation, Birkbeck, University of London).
- Musenze, I. A., & Mayende, T. S. (2023). Ethical leadership (EL) and innovative work behavior (IWB) in public universities: examining the moderating role of perceived organizational support (POS). *Management Research Review*, 46(5), 682-701.
- Kirkland, J. E. (2017). *The roles of perceived organizational support and anticipated change in organizational support in predicting employee affective commitment and well-being* (Doctoral dissertation).
- Musenze, I. A., & Mayende, T. S. (2023). Ethical leadership (EL) and innovative work behavior (IWB) in public universities: examining the moderating role of perceived organizational support (POS). *Management Research Review*, 46(5), 682-701.
- Musenze, I. A., & Mayende, T. S. (2023). Ethical leadership (EL) and innovative work behavior (IWB) in public universities: examining the moderating role of perceived organizational support (POS). *Management Research Review*, 46(5), 682-701.
- Gojny, M., & Struzyna, J. (2013). The doubts and questions in POS theory. In *The 8th International Conference in Critical Management Studies*. The University of Manchester Library.
- Eisenberger, R., Huntington, R., Hutchison, S. and Sowa, D. (1986), "Perceived organizational support", *Journal of Applied Psychology*, Vol. 71 No. 3, pp. 500-507, doi: 10.1037/0021-9010.71.3.500.
- Nazir, S., Shafi, A., Atif, M.M., Qun, W. and Abdullah, S.M. (2019), "How organization justice and perceived organizational support facilitate employees' innovative behavior at work", *Employee Relations: The International Journal*, Vol. 41 No. 6, pp. 1288-1311, doi: 10.1108/ER-01-2017-0007.
- Eisenberger, R., Cummings, J., Armeli, S. and Lynch, P. (1997), "Perceived organizational support, discretionary treatment, and job satisfaction", *Journal of Applied Psychology*, Vol. 82 No. 5, pp. 812-820, doi: 10.1037/0021-9010.82.5.812.
- Gaudet, M.C. and Tremblay, M. (2017), "Initiating structure leadership and employee behaviors: the role of perceived organizational support, affective commitment and leader-member exchange", *European Management Journal*, Vol. 35 No. 5, pp. 663-675, doi: 10.1016/j.emj.2017.04.001.
- Chung, Y.W. (2017), "The role of person-organization fit and perceived organizational support in the relationship between workplace ostracism and behavioral outcomes", *Australian Journal of Management*, Vol. 42 No. 2, pp. 328-349, doi: 10.1177/0312896215611190.
- Rhoades, L. and Eisenberger, R. (2002), "Perceived organizational support: a review of the literature", *Journal of Applied Psychology*, Vol. 87 No. 4, pp. 698-714
- Ouchi, W.G. and Wilkins, A.L. (1985), "Organizational culture", *Annual Review of Sociology*, Vol. 11 No. 1, pp. 457-483.
- Eisenberger, R., Rhoades Shanock, L., & Wen, X. (2020). Perceived organizational support: Why caring about employees counts. *Annual Review of Organizational Psychology and Organizational Behavior*, 7(1), 101-124.

- Grobben, E. (2022). *Effective line manager behaviours that stimulate innovative work behaviour of employees in the three different phases of IWB: idea generation, idea promotion and idea realization at knowledge intensive service-oriented organizations* (Master's thesis, University of Twente).
- Rai, A., & Agarwal, U. (2018). Impact of workplace bullying on employee outcomes: a study of Indian managerial employees. *International Journal of Productivity and Performance Management*, 67(7), 1147-1170.
- ALDABBAS, H. (2021). *Linking perceived organisational support and employee creativity: examining the roles of work engagement, intrinsic motivation, and extrinsic rewards* (Doctoral dissertation, The British University in Dubai (BUiD)).
- Park, J., & Kim, W. (2022). The impact of perceived organizational support on innovative work behaviour through psychological empowerment: Focusing on the moderated mediating role of organizational procedural justice. *Journal of Technical Education and Training*, 14(1), 178-191.
- De Jong, J. P., & Den Hartog, D. N. (2008). Innovative work behavior: Measurement and validation. *EIM Business and Policy Research*, 8(1), 1-27.
- Wallach, E.J. (1983), "Individuals and organizations: the cultural match", *Training & Development Journal*, Vol. 37 No. 2, pp. 28-36.
- Ahearne, M., Mathieu, J., & Rapp. A. (2005). To empower or not to empower your sales force? An empirical examination of the influence of leadership empowerment behavior on customer satisfaction and performance. *Journal of Applied Psychology*, 90. 945-955.
- Cai, W., Lysova, E.I., Khapova, S.N. and Bossink, B.A. (2018), "Servant leadership and innovative work behavior in Chinese high-tech firms: a moderated mediation model of meaningful work and job autonomy", *Frontiers in Psychology*, Vol. 9, p. 1767, doi: 10.3389/fpsyg.2018.01767.
- Scott, S.G. and Bruce, R.A. (1994), "Determinants of innovative behavior: a path model of individual innovation in the workplace", *Academy of Management Journal*, Vol. 37 No. 3, pp. 580-607, doi: 10.5465/256701.
- Yoshida, D.T., Sendjaya, S., Hirst, G. and Cooper, B. (2014), "Does servant leadership foster creativity and innovation? A multi-level mediation study of identification and prototypicality", *Journal of Business Research*, Vol. 67 No. 7, pp. 1395-1404, doi: 10.1016/j.jbusres.2013.08.013.
- Becker, T.E. (2005), "Potential problems in the statistical control of variables in organizational research: a qualitative analysis with recommendations", *Organizational Research Methods*, Vol. 8 No. 3, pp. 274-289, doi: 10.1177/1094428105278021.
- Fornell, C. G., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.